

REMARKS

Claims 9, 14, 15, 21 and 22 are pending in this application.

By this Amendment, claim 9 is amended to incorporate the subject matter recited in claim 16. Accordingly, claim 16 is canceled.

New claims 21 and 22 are added to recite additional features disclosed in the specification at, for example, Figs. 4A and 14, and paragraphs [0048] and [0099].

Claims 1-8, 10-13 and 17-20 are also canceled in view of the finality of the Restriction Requirement.

The Office Action rejects claims 9 and 14-16 under 35 U.S.C. §103(a) over U.S. Patent No. 5,477,087 to Kawakita et al. ("Kawakita") in view of U.S. Patent Publication No. 2002/0151161 to Furusawa et al. ("Furusawa"). This rejection is respectfully traversed.

Claim 9, as amended, recites droplets that include a precursor of UV-hardened resin, and hardening a protruding part precursor by applying UV rays. Kawakita and Furusawa do not disclose or suggest these features.

Kawakita discloses forming resin bumps 15, covering the resin bumps 15 by metal layer 17, and curing the resin bumps 15 with heat. See Fig. 1 and col. 3, lines 22-47. Kawakita discloses curing the resin bumps 15 with heat, but does not disclose or suggest hardening UV-hardening resin by UV rays. Therefore, Kawakita does not disclose or suggest the subject matter recited in claim 9.

Furusawa discloses forming lyophilic regions 11a and lyophobic regions 11b by UV irradiation through a photo mask 13. See Figs. 2 and 3, and paragraphs [0044] and [0045]. Furusawa discloses UV irradiation to form different regions, but does not disclose or suggest using the UV irradiation to harden a precursor of UV-hardening resin. In fact, Furusawa does not disclose or suggest using resin. Therefore, Furusawa does not supply the subject matter lacking in Kawakita.

For at least the above reasons, Kawakita and Furusawa, either individually or in combination, do not disclose or suggest the subject matter recited in claim 9, and claims 14 and 15 depending therefrom. Accordingly, withdrawal of the rejection of claims 9, 14 and 15 under 35 U.S.C. §103(a) is respectfully requested.

New claims 21 and 22 are believed to be patentable over the applied references at least for the patentability of claim 9, from which they depend, as well as for additional features they recite. For example, Kawakita discloses forming bumps 15 on electrode 52. See Fig. 3D. Kawakita does not disclose or suggest discharging droplets, much less discharging droplets on an insulating layer, as recited in claim 21.

Furthermore, Kawakita discloses transferring formed bumps 10 from a glass substrate 41 where bumps 10 are formed onto electrodes 52 of a circuit board 51. See Figs. 4D and 5B, and col. 4, lines 37-40 and 46-56. Kawakita does not disclose or suggest sandwiching a protruding part between a conductive layer and an insulating layer on which the droplets are discharged, as recited in claim 22.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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